

## Product datasheet for **TA321721**

### **RAD50 Rabbit Polyclonal Antibody**

#### **Product data:**

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 500-2000 WB positive control: 293T, Hela, K562, NIH/3T3 and RAW264.7 cells IHC: 50-200 Positive control: Human colon cancer Predicted cell location: Cytoplasm, Nucleus
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Synthetic peptide corresponding to a region derived from 325-339 amino acids of Human RAD50 homolog ( <i>S. cerevisiae</i> )
Formulation:	PBS pH7.3, 0.05% NaN <sub>3</sub> , 50% glycerol
Concentration:	lot specific
Purification:	Antigen affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	154 kDa
Gene Name:	RAD50 double strand break repair protein
Database Link:	<a href="#">NP_005723</a> <a href="#">Entrez Gene 19360 Mouse</a> <a href="#">Entrez Gene 64012 Rat</a> <a href="#">Entrez Gene 10111 Human</a> <a href="#">Q92878</a>



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**Background:**

The protein encoded by this gene is highly similar to *Saccharomyces cerevisiae* Rad50; a protein involved in DNA double-strand break repair. This protein forms a complex with MRE11 and NBS1. The protein complex binds to DNA and displays numerous enzymatic activities that are required for nonhomologous joining of DNA ends. This protein; cooperating with its partners; is important for DNA double-strand break repair; cell cycle checkpoint activation; telomere maintenance; and meiotic recombination. Knockout studies of the mouse homolog suggest this gene is essential for cell growth and viability. Mutations in this gene are the cause of Nijmegen breakage syndrome-like disorder.

**Synonyms:**

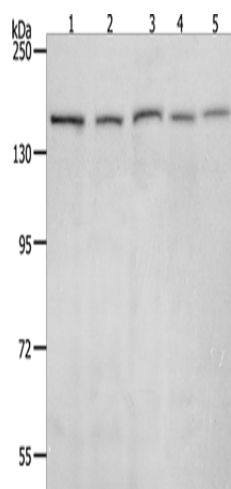
hRad50; NBSLD; RAD502

**Protein Families:**

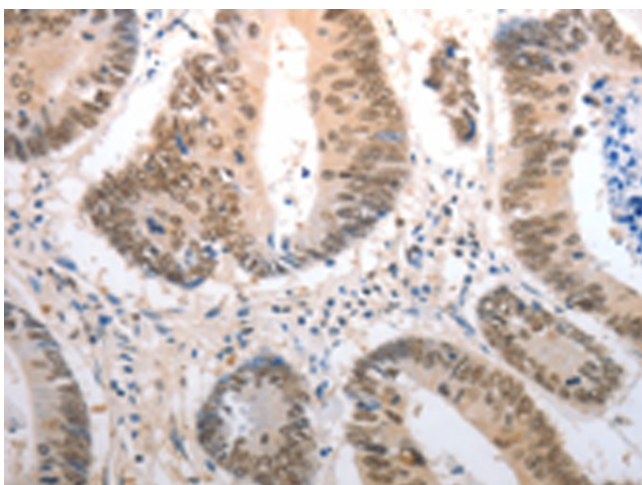
Druggable Genome

**Protein Pathways:**

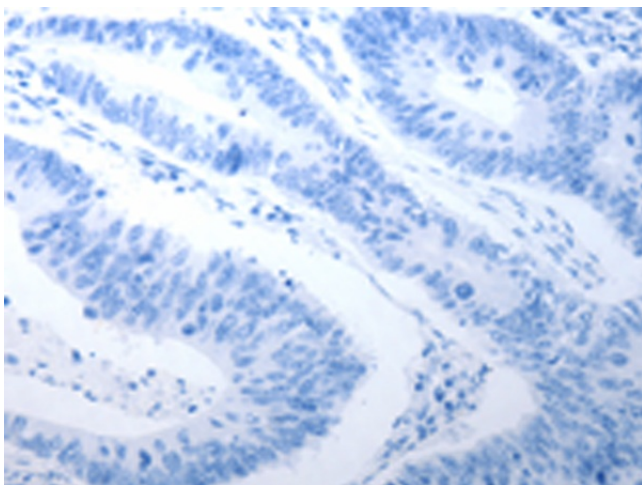
Homologous recombination, Non-homologous end-joining

**Product images:**

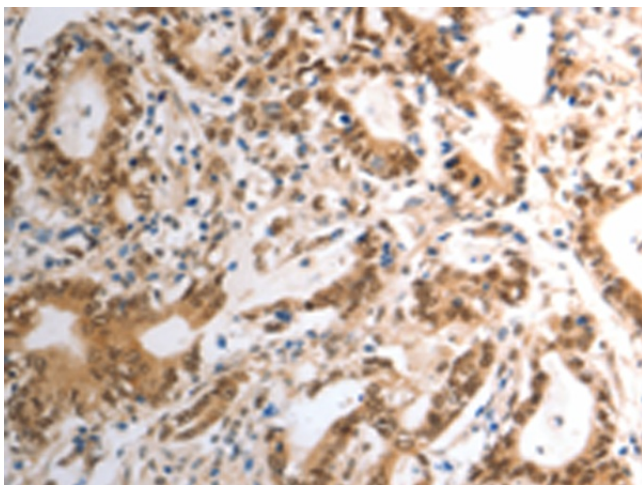
Gel: 8%SDS-PAGE  
Lysate: 40 µg  
Lane 1-5: 293T cells  
Hela cells  
K562 cells  
NIH/3T3 cells  
RAW264.7 cells  
Primary antibody: TA321721 (RAD50 Antibody) at dilution 1/900  
Secondary antibody: Goat anti rabbit IgG at 1/8000 dilution  
Exposure time: 5 minutes



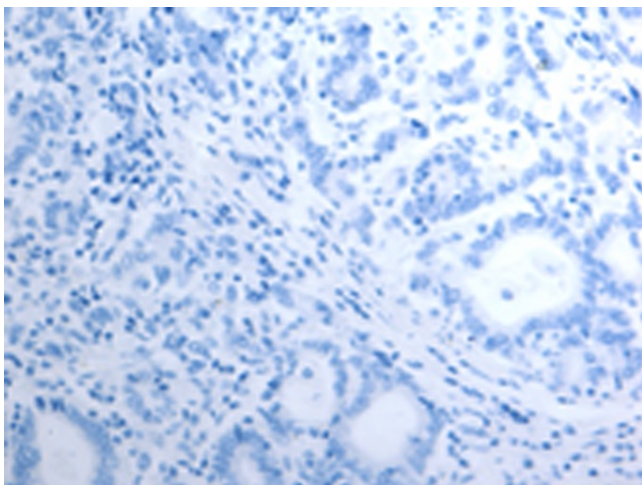
Immunohistochemistry of paraffin-embedded Human colon cancer tissue using TA321721 (RAD50 Antibody) at dilution 1/40 (Original magnification: ×200)



Immunohistochemistry of paraffin-embedded Human colon cancer tissue using TA321721 (RAD50 Antibody) at dilution 1/40, treated with synthetic peptide. (Original magnification:  $\times 200$ )



Immunohistochemistry of paraffin-embedded Human gastric cancer tissue using TA321721 (RAD50 Antibody) at dilution 1/40 (Original magnification:  $\times 200$ )



Immunohistochemistry of paraffin-embedded Human gastric cancer tissue using TA321721 (RAD50 Antibody) at dilution 1/40, treated with synthetic peptide. (Original magnification:  $\times 200$ )